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## CONGRESSIONAL RECORD — SENATE

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ipal buildings' upper floors and in a skyscraper overlooking the East River at Wall Street. In these two sites are the offices of the department of water supply, gas and electricity, which operates the city water system, and the State-created board of water supply, which plans and builds the city's system. Last week, as the drought continued, engineers in both bodies were undergoing a basic revision of thinking for this reason:

New York is enduring the longest period of drought that has occurred in the three-and-a-half centuries since Henry Hudson went up the river.

## EVIDENCE

This, at least, seems to be the evidence of records. New York's engineering records on rainfall, streamflow, and ground water go back only a century at the longest. Its social records, which might indicate unusual periods of weather, go back only a few centuries more. Apparently, there never has been a successful scientific effort at determining the recurrence of droughts over a good long time, like a millennium, by the study of such things as tree rings, pollen deposits, and geologic clues.

All water systems are built on records. Curves—"mass curves" they are called—are drawn of such things as rainfall, water consumption, and growth of population. Lines are drawn from peak to peak on the curve, bridging the valleys of past droughts, to discover how big the supply would have to be to keep from running dry in the worst drought that has ever occurred.

## SAFE YIELD

The final result is a statement of capacity called by water engineers the safe yield. It is the key to all systems and the figure over which all the technical controversy about the city's present water plight will rage.

Members of the board of water supply freely concede events have proved that their safe yield figures was too high.

The worst drought of the past was a 2-year period in the thirties; this was long ago exceeded by the present 4-year drought. The board also points out, though, that the public couldn't have been asked to spend millions for reservoirs that couldn't be justified on the basis of experience.

New water systems are not only expensive but slow to develop. The average lapse from the time the idea is proposed until water runs through the mains is a quarter of a century.

New York's planners are faced, moreover, with a demand whose scale is rarely appreciated. The volume of water used by the city is more than one-twentieth of all the water supplied by municipal systems in the United States.

## ANSWERS

The city consumes, day in and day out, a volume of water equal to more than half the mighty Hudson River as it flows now past the gaging station near Albany. Demand on such a scale precludes almost all of the hasty solutions to water shortages put forward in crises.

For a quick solution, the best possibility is the one that occurs at the end of "The Day New York Went Dry." In the book, the city is in terrible straits when—aw, you might as well buy the book and find out.

[From the New York Times, June 13]

REPORTS FROM THE NATION—DROUGHT

## PARADES NORTHEAST

An Atlanta restaurant, advertising to New Yorkers in big black letters "all the water you can drink without request," brings home to them that, thanks to the drought, they must order water even when they aren't drinking bourbon.

New York fountains that use city water have been turned off. Watering lawn and gardens is restricted, use of private swimming

pools banned. And city dwellers have been exhorted by Water Commissioner Armand D'Angelo to reduce their water use by a third.

The drought extends far beyond New York, however. It stretches from southwestern Maine into Virginia. In severe or moderate form it covers two-thirds of New York, all of New Jersey, and half of Pennsylvania.

It's at its worst over the New York watershed in the Catskills and the Hudson Valley. That area, normally humid, has been in drought for 4 years, since the fall of 1961, according to Wayne C. Palmer, climatologist of the U.S. Weather Bureau.

The rain gages show that this drought, in intensity and duration, is the most severe in the region in 50 years. What caused it?

Apparently the prevailing pattern of upper-air currents has shifted more to the Northwest than normal, according to Mr. Palmer. That is, the air masses that move in the lower half of the troposphere—the lower 30,000 feet of the atmosphere—are coming from the Northwest rather than the West as they approach the east coast. As they approach the Appalachians traveling from West to East they tend to bulge into Canada.

The direction affects the motion. Normally, the airflow is upward. As air rises in the lower atmosphere it cools, its relative humidity increases and when it is cool enough it forms rain clouds.

But in the last 3 years the more northerly flow of the air currents has resulted in a phenomenon weathermen call subsidence, the air masses subsiding or sinking down toward earth.

Because the flow comes from a more northerly area, its temperature is lower. This flow halts warmer air masses, particularly in the ridge of air over the Appalachians.

What happens then is just the opposite of the direction of the churning motion needed to make rain. The cooler air masses sink down and are compressed by the ridge. The ridge warms them and dries the air, inhibiting precipitation. Normally, the upper air goes through a wringer that squeezes out moisture. Under subsidence they go through a process like a laundromat's drier.

The last time New York City's reservoirs were full—storing 476.5 billion gallons of water—was in 1961. Now, with the depletion period starting, they are 84.9-percent full—down to only 261.7 billion gallons.

Does this mean that New York could have a water famine in October? Yes, indeed, Water Commissioner D'Angelo holds. But they need not, he says. New Yorkers use about 78 gallons a person a day. If each New Yorker could cut his use to 25 to 30 gallons a day, Mr. D'Angelo estimates, the city will make out, without famine.

# HEARINGS BY THE FOREIGN RELATIONS COMMITTEE ON THE SITUATION IN THE DOMINICAN REPUBLIC AND IN SOUTH VIETNAM

Mr. JAVITS. Mr. President, the Foreign Relations Committee has just announced its intention to hold fact-finding hearings on the situation in the Dominican Republic. I welcome that announcement, for I have felt for some time—as others in the Congress and across the country have felt—that Congress should be a continuing party to the consideration of conflicts in which U.S. troops are taking part and other U.S. military action is undertaken. I believe that Congress should thus assert its interest and constitutional responsibilities in foreign policy.

But the United States is now involved militarily on two fronts: In the Dominican Republic and, heavily, in Vietnam. Congress, both as a whole and through

the appropriate committees, should, therefore, be factfinding, not on just one of these fronts, but on both.

I suggest the Foreign Relations Committee under take factfinding hearings on Vietnam, too. No less than hearings on the Dominican Republic, these would contribute enormously to a national understanding of the issues involved. Particularly at a time when the country seems to be about to embark on a major Asian ground war—which could entail the risk of greater U.S. casualties than at any time since the Korean war and which could escalate the Vietnam conflict onto a new and vastly more dangerous level—the holding of such hearings would be a service of incalculable value to the Nation.

Such factfinding hearings could form the basis for another resolution to bring up to date the joint resolution of August 10, 1964, in accordance with which the President is now acting, and which, as I have said many times before, is now getting out of date.

The Foreign Relations Committee could, like the United States, divide its forces for the present purpose into ad hoc committees on the Dominican Republic and on Vietnam. It could also explore the idea of joint hearings with the House Foreign Affairs Committee.

Among the questions which need to be answered are these:

First. What new responsibilities are our forces assuming in Vietnam?

Second. What extension of the nature and the area of the conflict is contemplated?

Third. What outside help is the Vietnamese getting, and what assistance is North Vietnam receiving from other Communist countries?

Fourth. What is the situation in South Vietnam as concerns the desire of its people and government to have us there, especially in view of the tremendous instability of the South Vietnamese Government?

Fifth. What is the situation in southeast Asia and other parts of Asia—in Thailand, in Burma, in Malaysia, in India, in Pakistan, in Japan, and the Philippines—concerns the desire to have us engaged in an escalated way in the Vietnam struggle?

Sixth. What help are we getting from our allies, such as those in the Southeast Asia Treaty Organization, and what is the likelihood of our getting more help?

Seventh. What are the practical possibilities of regional or United Nations action to maintain peace in Vietnam?

Mr. President, the country needs the answers to these and other questions concerning Vietnam fully as much as it needs answers about the Dominican Republic. I urge the Foreign Relations Committee to follow its praiseworthy action regarding the Dominican Republic by taking similar action with respect to hearings on Vietnam.

## ORDER OF BUSINESS

The PRESIDING OFFICER. Is there further morning business? If not, morning business is closed.